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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
	)	
Amendment of the Commission's Rules to Establish a New Radio Service	)	RM-8499
	)	

Reply Comments Filed in Response to a Petition for Rule Making

Filed by:
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Date: September 9, 1994

SUMMARY

Comments filed by GMRS users, and by organizations which represent them, caution about and substantially document the problems which FRS would cause to GMRS operations. The FRS would *reverse* recently implemented Commission policy intended to protect and promote GMRS as a *personal* radio service.

Comments filed by manufacturing and equipment sales interests support the FRS, although they fail to understand the negative impact which FRS would have on GMRS. These interests fail to defend why FRS should be located in spectrum currently allocated to GMRS, and not in other spectrum which has just recently or is shortly expected to be opened up for the Personal Communications Services (PCS). There is ample opportunity in the PCS to offer precisely the kind of service which Tandy envisions for the FRS.

The Personal Radio Steering Group, Inc. (PRSG) respectfully recommends that the Petition be **DENIED.**

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I. BACKGROUND OF THE COMMENTER

The Personal Radio Steering Group, Inc. (PRSG) is an all-volunteer, not-for-profit corporation established in 1980 by licensees in the General Mobile Radio Service (GMRS, FCC Part 95A) to provide services to and to serve as an advocate for the GMRS personal-use community.

The PRSG has written and distributed more than 300 publications on GMRS licensing, technology and operating practices. PRSG's flagship publication, the GMRS National Repeater Guide, lists each of the more than 3,000 GMRS repeaters, their sponsors, technical characteristics and detailed coverage information. About to go into its tenth edition, the Guide has become the essential reference to this cooperative, nonprofit communications network for licensed private individuals. PRSG also works closely with major land mobile equipment manufacturers to disseminate instructional materials for radio purchasers.

II. REVIEW OF THE COMMENTS

The PRSG has reviewed the various comments filed to this Petition from Tandy Corporation (Tandy) to create a new Family Radio Service (FRS).

The comments submitted by Gary Krystof (Krystof) and Henry J. Van Bogaert (Van Bogaert) represent the views of individual GMRS licensees, and are typical of the opinions that the Commission would find from GMRS personal licensees if the period for commenting were longer, and if more GMRS personal licensees knew about the proposals in the Tandy Petition. Both oppose the creation of the Family Radio Service if it would share spectrum currently allocated to the General Mobile Radio Service.

Krystof brings to this discussion extensive experience as a long-time licensee and user in several radio services, and opposes Tandy's request to such an extent that he now refrains from further Radio Shack purchases. Van Bogaert cautions that proceeding with the FRS as requested in the Tandy Petition would turn the GMRS into a "wasteland" like CB radio. He especially

defends the concept that GMRS repeater operators must retain full control over the use of their own repeater stations, and that they must not be expected or required to make their repeater services open to just anyone.

The comments filed by Dr. Michael C. Trahos (Trahos) represent the long-time experience of a personal GMRS licensee and user in numerous other radio services, and the experience of someone who has undertaken the task of coordinating the use of CTCSS by GMRS repeater operators over a multi-state area. Dr. Trahos also has extensive experience in the field of emergency medical communications.

Trahos explains at length why the GMRS user community has waited to propose future uses for the interstitial channels in the GMRS 467 MHz band, and cautions that making them available for FRS use would cause serious interference to GMRS repeaters. He also explains why GMRS repeaters operating on the 467.675/462.675 MHz channel must continue to employ CTCSS and other access-limiting protocols.

The comments submitted by James E. Bear, Chairman of the Board of Directors of REACT International, Inc. (REACT) represent the opinions of the premier national volunteer organization involved in emergency communications monitoring and public service activities. REACT supports an effort to create the kind of service envisioned for the FRS by the Tandy Petition, but strenuously opposes locating any new, unlicensed radio service in spectrum currently allocated to the GMRS.

REACT argues that an FRS implemented in the manner requested by Tandy would not and could not meet the desirable operational objectives sought for this new unlicensed radio service. REACT particularly takes exception to any requirement for FRS accessibility to GMRS repeaters on the 467.675/462.675 MHz channel, many of which are operated by or support the activities of local REACT teams. REACT encourages Tandy and the FCC to join with other industry and user representatives to explore the creation of an FRS in spectrum *other than* that allocated to the GMRS, and employing contemporary technologies.

The comments filed by Motorola, Inc. (Motorola) represent the views of an interest similar to those of Tandy Corporation, as a manufacturer and/or marketer of communications equipment. Motorola also has extensive experience in research and development of new technologies, and should be encouraged to apply this experience to the development of an FRS-type of radio service, but instead in other spectrum that PRSG identified[1] as more suitable for FRS.

The implication[2] that its involvement in the GMRS "market segment accounted for nearly 10 million dollars in domestic equipment sales in 1993" is preposterous. That would have required an average expenditure of more than $600 by *every* GMRS licensee *just on Motorola equipment* and just in 1993, an absurd claim. In the extensive GMRS experience of PRSG, Motorola's presence in the GMRS market is marginal at best, and has certainly been eclipsed in the last twelve calendar months by that of the Tandy.

Motorola supports the request for the creation of a new FRS, but offers no defense of why GMRS spectrum should be used, and evidences little awareness of the serious interference problems and user conflicts that would be created by locating the FRS in current GMRS spectrum.

Comments of the Mobile and Personal Communications Division, Private Radio Section of the Telecommunications Industry Association (TIA) also support the creation of a new FRS. Like Motorola, TIA fails to recognize the problems that the location of the FRS in spectrum currently allocated to the GMRS would cause to current and future GMRS operations.

III. CHOICE OF SPECTRUM

Among those representing *actual users* of the GMRS, there was unanimous rejection of the proposal that existing GMRS spectrum could be shared with the proposed Family Radio Service.

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1) PRSG *Comments*, pages 10, 17 and 18.

2) Motorola *Comments*, page 2.

FRS will fully interact with licensed GMRS operations on the same and adjacent channels, among its other technical and policy defects.

TIA states that it will participate in developing technical standards for the FRS.[3] The usual "technical standards" of TIA, governing only such details as emission characteristics and power levels, will not prevent the FRS' invasion of GMRS spectrum by irresponsible users and GMRS ineligibles.

Motorola believes that

> "limiting transmitter output power to 500 milliwatts ... should adequately protect GMRS stations operating on 12.5 kHz adjacent channels from harmful interference."[4]

This statement demonstrates Motorola's confusion about the impact that FRS operations will have on licensed GMRS operations.

In the 462 MHz band, full power repeater and base stations will *certainly* cause interference to FRS receivers on the interstitial frequencies, just as these base and repeater stations cause interference to the existing *licensed* GMRS stations already operating there.

But there is an important difference. Under the authority of their licenses, GMRS operators may operate on the assigned primary channels. A GMRS user will choose the low-power, interstitial channel most appropriate for that particular time and place (depending on the instant occupancy of the adjacent primary channels in that area) when the extended communications range of the repeater station is not necessary. This choice provides licensed GMRS users with a greater degree of protection in their non-repeater communications than they could have by communicating instead only on the assigned repeater *output* channel. (Distant repeaters can cover up other, even nearby mobile and especially portable transceivers.)

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3) TIA *Comments*, page 2.

4) Motorola *Comments*, page 6.

On the other hand, FRS users will *not* have access to the GMRS primary channels, and will become resentful of this interference. This will inevitably *decrease* FRS operator willingness to cooperate with those whom they identify with higher power, licensed GMRS operations.

Instead, the problem with interference in the 462 MHz band will be that caused by FRS operators to *licensed* GMRS stations also operating on precisely the *same* interstitial frequencies, not merely on the adjacent GMRS primary channels (as Motorola seems to think[5]).

The situation in the 467 MHz band is quite different. GMRS repeaters, with their typically high-mounted antennas, would have an *exaggerated vulnerability* to interference from transmissions on the 467 MHz interstitial frequencies. Mere reductions in power cannot alone compensate for or provide adequate protection to these repeaters, because of the elevated heights of their receiver antennas. The Commission recognized this vulnerability[6], and created special protections for the repeater input frequencies in the 467 MHz band. GMRS personal users[7] have cautioned about this problem. Allowing FRS operations on the 467 MHz interstitial frequencies would undo these essential and only recently implemented protections.

Motorola also

> "would also support investigating whether limiting the authorized bandwidths of offset channel operations would afford any additional needed protection."[8]

This is not a viable solution. GMRS rules permit existing conventional 5 KHz deviation NBFM emissions on the 462 MHz interstitial frequencies. If GMRS users are to be able to use the same radios on both the primary and interstitial frequencies, then the same bandwidths and modulation modes need to be permitted for use by licensed GMRS stations on both the primary and interstitial frequencies.

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5) Motorola *Comments*, page 6.

6) *Report and Order*, FCC Docket 87-265, paragraph 56.

7) *Comments* by Krystof, Trahos and Van Bogaert.

8) Motorola *Comments*, page 6.

The market has become flooded in the past two years with low-power transceivers capable of operation primarily *or solely* on the interstitial frequencies. They operate with a full 5 KHz deviation. It will be many years before the last of these radios will disappear from the GMRS spectrum, FCC dictates of equipment performance changes notwithstanding.

FRS users would find that a limitation in deviation on the very same center frequencies on which full 5 KHz deviation was permitted by conventional, licensed GMRS operations would be totally unacceptable. The conflict and competition that would result from this difference in permissible deviation levels would foment a further breakdown in channel discipline.

Clearly, a mixing of licensed GMRS and unlicensed FRS operations on the same and adjacent frequencies is *a recipe for controversy and disaster*. GMRS licensee commenters projected precisely this outcome, based on decades of relevant experience in the Personal Radio Services.[9]

Limited power levels and miniature transceivers will not mitigate these effects any more than they were able to do so when unlicensed devices shared the licensed CB spectrum.[10]

Nor can such standards, purportedly to reduce interference to GMRS[11], compensate for the extraordinary *opportunity costs* paid by GMRS licensees if the FCC adopts FRS. Disciplined and professional-quality communications will become unrealizable on the GMRS interstitial frequencies:

- energy-wasting conflicts between FRS users and the GMRS community, especially GMRS repeater operators, will abound;
- the Commission will reject technological innovations because of perceived effects on incumbent FRS users; and,
- the value of the GMRS license will dissipate until the Commission terminates GMRS licensing in ignominious Citizens Band style.

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9) *Comments* of Trahos, Van Bogaert and REACT.

10) PRSG *Comments* at IV.

11) TIA *Comments*, page 2.

That FRS proponents invite the inevitable confusion and conflict between GMRS and FRS users is clear from Motorola's outrageous suggestion that unlicensed FRS users receive co-primary status with GMRS licensees.[12]

We are unaware of any other service that shares spectrum, *on a co-primary basis*, with unlicensed and unregulated consumer devices. Even in the unlicensed PCS spectrum, the Commission requires and will supervise a program to relocate licensed incumbents rather than to force such sharing.

No radio service forces its good-faith licensees to share the same privileges on the relevant frequencies with parties

- who have engaged in no interaction with federal authorities;
- whose locations are nowhere recorded;
- who are disconnected from the larger licensee community and its educational programs; and,
- who are not, *in actual practice*, subject to the penalties that attend unlicensed operation and violation of operating rules.

IV. LICENSING REQUIREMENTS

The central thrust of the Tandy Petition is not to create a new radio service, but to *delicense an existing one* in exchange for limits on authorized output power.[13]

Motorola contends that

> "the FCC's applications and regulatory fees would account for far too great a percentage of what should be a relatively low cost product."[14]

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12) Motorola *Comments*, page 6.

13) However, as we discussed in our earlier *Comments*, the 500 milliwatt power level proposed for the FRS is not that significantly different from the level employed by most GMRS handheld units. And the power ratio is *substantially less* than the 50:1 ratio that was supposed to distinguish CB transmissions from those of unlicensed, Part 15 transceivers formerly operated in the 27 MHz band. See PRSG *Comments* at VI.

14) Motorola *Comments*, page 5.

Motorola did not, however, propose a reduction in the GMRS fees or endorse the PRSG's previous request to the Commission to lower these fees in view of the substantial differences between GMRS and other Private Land Mobile Services.[15] [16]

Motorola evidences an ignorance of the licensing process when it condemns the process as "contain[ing] prohibitive eligibility restrictions."[17] The FCC regulations intend *precisely* to be restrictive. GMRS is a *personal* radio service, not a "general purpose" or "miscellaneous" radio service. Parties proposing communications which can be accommodated in other comparable private land mobile radio services should license there instead, and not in the GMRS. We invite Motorola to reread the *Report and Order* in FCC Docket 87-265[18], which clearly establishes the Commission's current policy that GMRS *not* become "the other Business Radio Service."

To the extent that the FRS would occupy spectrum currently allocated to the GMRS, the Tandy Petition and those who support it are merely attempting to *undo* established Commission policy that preserves the GMRS for *personal* use.

Motorola also offered no means by which the Commission could recoup the costs of regulating FRS from its users. We can only conclude that Motorola anticipates *no* regulation of FRS whatsoever, a proposal for disaster well documented by commenters Trahos, REACT and Van Bogaert.

We view with deep concern the Commission's attempts to obtain Congressional authority to eliminate licensing in the Personal Radio Services. Such authority is exceedingly premature. PRSG agrees with Trahos that GMRS de-licensing would meet "stiff opposition from the GMRS community".[19] We strongly reject its application to any additional Personal Radio Service until

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15) PRSG Comments to MD Docket No. 94-19, April 7, 1994.

16) It is tautological merely to conclude that Congress established the fee schedule and the Commission must observe it. Congress based the schedule on the FCC's proposals. PRSG again urges the Commission to reduce the GMRS fees it recommends to Congress to a more realistic level in the next fiscal year. We offer, as always, to document the basis for such reduction.

17) Motorola *Comments*, page 4.

18) Especially at paragraph 13.

19) Trahos *Comments*, paragraph 35.

such time as the service is sufficiently technologically advanced for legitimate authorization by rule.

We also wish to reassert our desire that the FCC simplify the GMRS licensing process. PRSG personnel have made nearly annual presentations to FCC staff, including at the topmost Bureau level, requesting changes that would remove much of the complexity and high error rate from GMRS licensing while retaining the *positive benefits* of licensing.

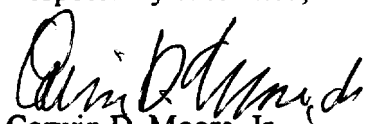
An unlicensed service would throw the radio out with the bathwater.

We intend to present additional proposals for changes in GMRS licensing to FCC staff, but if FRS is authorized much opportunity for worthwhile progress in GMRS will be lost.

CONCLUSION

The Commission has now received comments vigorously opposing the requests made by Tandy in RM-8499. The opposition is well founded and documented. PRSG respectfully requests that the Commission **deny** this Petition for Rule Making (RM-8499).

Respectfully submitted,



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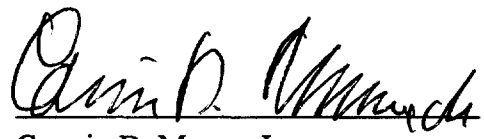
Certificate of Service

I, Corwin D. Moore, Jr., hereby certify that on this 9th day of September 1994 I caused a copy of the attached Reply Comments Filed in Response to a Petition for Rule Making of the Personal Radio Steering Group, Inc. to be mailed by first class United States Postage to the persons shown below:



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